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March 24, 1997

Mr. William F. Caton, Acting Secretary
Federal Communications Commission
1919 M Street NW Room 222
Washington DC 20554

In the Matter of:

Usage of the Public Switched Network by Information Service and Internet Access Providers	)))))	CC Docket 96-263

Dear Mr. Caton:

Enclosed are an original and sixteen (16) copies, a diskette copy, plus two extra public copies of the NOI Comments of Cincinnati Bell Telephone Company in the above referenced proceeding. A duplicate original copy of this letter and NOI Comments is also provided. Please date stamp this as acknowledgment of its receipt and return it. Questions regarding these Comments may be directed to me at the above address or by telephone on (513) 397-1393.

Sincerely,

David L. Meier

Enclosure

cc: International Transcription Services, Inc.
Competitive Pricing Division (two paper copies)

Cincinnati Bell Telephone Company
March 24, 1997

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Usage of the Public Switched Network by Information Service and Internet Access Providers	)))	**CC Docket No. 96-263**

COMMENTS OF CINCINNATI BELL TELEPHONE COMPANY

Cincinnati Bell Telephone Company ("CBT") submits these comments in response to the Commission's December 24, 1996 Notice of Inquiry ("NOI") in the above-captioned proceeding.[1] The NOI seeks comment on whether the Commission, after completing its reform of access charges, should consider any additional actions relating to interstate information services and the Internet. These comments are intended to assist the Commission in its evaluation of current options available to Enhanced Service Providers (ESPs) for purposes of obtaining access to their customers.

I. Introduction

Presently, most ESPs utilize the Public Switched Telephone Network (PSTN) to deliver their services via flat-rate local service offerings obtained from local exchange carriers (LECs). While the use of flat-rate service (rather than usage sensitive access charges) may have

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[1] In the Matter of Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Transport Rate Structure and Pricing; and Usage of the Public Switched Network by Information Service and Internet Access Providers, CC Docket Nos. 96-262, 94-1, 91-213 and 96-263, Notice of Proposed Rulemaking, Third Report and Order, and Notice of Inquiry, (FCC 96-488), released December 24, 1996 (hereinafter referred to as the "NOI").

contributed to the phenomenal growth in the services offered by ESPs, particularly the Internet, they have also caused unanticipated strains on the PSTN, which was designed for much different traffic levels and patterns. CBT believes that the Commission must modify its policies to reflect the changing traffic characteristics developing in the "information age." Failure to make appropriate policy changes now will negatively impact both ESP and non-ESP customers.

The current rules, which exempt ESPs from access charges, have led to the development of a pricing system which prevents LECs from charging the cost causers (i.e., the ESPs) for the additional costs their usage imposes on the network. As a result, all customers ultimately bear the costs of network upgrades necessary to carry the increased traffic resulting from ESP customers. In addition, ESP customers are being disadvantaged because the availability of flat-rate service may be slowing the development of more efficient technologies that could enhance the quality of service for ESP customers. If ESP services were priced on a cost-causative basis (i.e., if the subsidies from non-ESP customers were removed), customers would have more incentive to demand new alternatives that deliver services more efficiently and at the lowest possible cost. In short, by sending incorrect pricing signals, the current system is inhibiting innovation. Thus, CBT encourages the Commission to consider modifications to its rules to spur innovation and promote the most efficient use of the network for both voice and data traffic.

In the remainder of these comments, CBT reviews some of the problems it has experienced in handling the rapidly increasing volume of Internet traffic, and provides input on the solutions CBT believes hold the most promise for efficiently handling the burgeoning growth in ISP traffic in both the short and long term.

II. Impact of ISP Traffic on the Network

ISP traffic is having a significant impact on CBT's network. This is especially true with respect to Internet traffic. CBT currently offers flat-rate local exchange service across nearly its entire service territory. This large local calling area allows CBT's customers to make calls throughout most of the greater Cincinnati area without incurring toll charges. Today, ISPs can set up a single point of presence (POP) within CBT's territory, thereby gaining local access to nearly all of CBT's customers. Most large ISPs in CBT's territory buy trunk-side connections such as digital trunking (e.g., Trunk Advantage℠) or primary rate interface trunks (e.g., PRIME Advantage℠). These are "non-blocking" elements and are priced based on similar business line rates. The availability of multiple comparably priced options has enabled the 52 Internet providers operating in the greater Cincinnati area to take advantage of the efficiencies of digital technology as their customer bases expand. Although this trunking configuration is more efficient than the line side terminations employed more extensively in some networks, it does not alleviate the congestion problems that can arise at the switching element. Congestion problems at the switch can develop regardless of how the ISPs have designed their networks.

Recent experience in CBT's central offices makes it clear that the extraordinary growth of ISP traffic can cause problems not only for ISP customers, but also for non-ISP customers attempting to access the PSTN. During the fourth quarter of 1996, CBT began experiencing significant problems. Subscriber complaints concerning an inability to call out of the greater Cincinnati area grew as calls to area ISPs increased sharply. Periods of excessive network

blockage within three CBT wire centers were tracked and found to coincide with excessive overflow periods to one national Internet provider which had recently begun offering its customers a flat-rate service option. Because the ISP's network could not accommodate the increase in traffic that its new pricing scheme generated, many of its customers received a standard busy signal when calling the ISP's access number. These customers continued to redial the number attempting to connect. This continual redialing eventually triggered a "fast busy signal" or "reorder" tone to all calls coming into that switch indicating that all lines into that end-office switch were in use. Until some of the capacity on that switch was freed, no calls could be placed or received. Clearly, situations like this cannot be allowed to occur. Although in this particular case the involved ISP has added additional trunks to accommodate its current traffic, there is no guarantee that similar incidents will not occur with other providers or at other locations.

The above example illustrates one way in which the current flat-rate pricing system made possible by the ESP access charge exemption can negatively impact the service of all LEC subscribers, not just those accessing the Internet. However, even if all ISPs properly size their networks, the burden that increased Internet use is placing on LEC networks will be shared by all LEC subscribers as long as the current policies remain in place. The very nature of Internet traffic necessitates that LECs modify their voice networks to accommodate the traffic with no degradation in service quality to customers. CBT's network is not designed to accommodate customers who occupy trunking capacity for 30 minutes or more during the busy hour. It is designed to handle, on average, 4 CCS to 6 CCS, or calls of 6 to 10 minutes in duration during

the busy hour. In order to accommodate these longer calls, CBT will be forced to build additional interoffice trunks.

Surpassing the cost of adding interoffice trunks will be the costs involved in reconfiguring Line Units to prevent blockage at the customer side of the switch. The switching network is built for 4:1, 6:1 or 8:1 concentration ratios. These concentration ratios give CBT the ability to share a portion of a Line Unit with either 4, 6, or 8 customers. These concentration ratios are based on the usage for the office. As usage increases, equipment reconfigurations are required. If a specific Line Unit experiences slow dial tone or blocks calls, the line is moved to a different Line Unit with lower blockage. Each move costs $1.00 per line. CBT estimates that this issue will become the greatest component of the cost of accommodating ever increasing Internet traffic.

Unless LECs are given the flexibility to price access for ESPs in an economically efficient manner, which in turn will lead to more technologically efficient alternatives to transporting data traffic over the voice network, the modifications described above will be necessary to maintain the service quality standards required for the PSTN. Moreover, the costs associated with making those modifications will be borne by all network users, the vast majority of whom do not use the Internet.

III. Solutions to Congestion in the PSTN

CBT submits that the only effective solution to the congestion problems being experienced in the PSTN (i.e., the circuit switched network) is to remove the constraints which prevent efficient pricing of services offered by LECs to ESPs. If LECs were able to price their

services in a manner that properly reflects the costs of providing the services, ESPs would seek out the most technologically efficient means of providing their services to end-users and the congestion problems currently experienced on the circuit switched network would be eliminated.

The current pricing scheme has inhibited the move to more efficient data networks because LECs are hesitant to invest in the new technologies knowing that under the current rules, they will be unable to recover their investments. In addition, ESPs have limited incentives to demand these new services when they have access to the circuit switched network at below cost rates. As a result, businesses are being denied access to the increased bandwidth networks that will enable them to transact business more efficiently and schools and residential consumers are being slowed in their efforts to tap the vast expanses of information that the Internet holds for them. CBT urges the Commission to initiate a proceeding to create incentives to utilize these technologies as soon as the access charge proceeding is completed.

CBT believes that the long-term solutions lie in removing the data traffic from the PSTN through the use of Digital Subscriber Line (DSL) technologies. However, in the short-term, until the Commission's rules are revised to eliminate the provisions that have caused the current inefficient pricing system and the DSL technologies are more widely available, CBT believes the best solutions for alleviating the PSTN congestion are alternate trunking arrangements. Below, CBT briefly describes what it believes are the best solutions available in both the short and long-term.

A. Short-Term Trunking Solutions

CBT believes the following solutions hold the best potential for addressing congestion problems in the short-term at the lowest possible cost.

1. Modem Pools

This short-term solution involves the deployment of modem pools to off-load the trunking network of ISP traffic. This solution can be implemented in offices that have AIN capability or the ability to route on 7 or 10 digits, not just the NPA-NXX. With the modem pools, the process works as follows: (1) a customer call comes into the office; (2) the switch identifies the call as an ISP based on the number dialed; (3) the switch routes the call to the modem pool trunk group; (4) the modem pool routes the call based on digits dialed to an ISP over the LEC's frame relay network; and (5) the ISP connects the customer to the Internet. This solution, which will be available near the end of 1997, has several advantages. It converts the data calls to packet data, reduces tandem trunking, and restores trunks to mostly voice services. Although this solution does require the ISP to adapt its technology, it would significantly reduce blockage experienced by customers.

2. Foreign Exchange Trunks

Under this solution, foreign exchange trunks would simply take facilities directly from the customers' end-office to the ISP's POP. This solution is similar to the modem pool, except that ISPs would have to add trunks from other end-offices. The foreign exchange solution is comparable to a long distance carrier which originally purchases trunks to a tandem and later builds a direct route to an end-office to save on tandem charges. The foreign exchange trunks

could be an attractive short-term solution because they match the current ISP operation, reduce LEC tandem trunking capital costs, and are available today. Unfortunately, today, ISPs have no incentive to build direct routes to end-offices because under the current rules LECs subsidize the tandem routing of Internet traffic.

B. Long-Term Access Solutions

CBT believes that the long-term solutions depend upon separating ISP traffic from voice traffic and transporting it over packet switched networks using various types of DSL technology (xDSL). Among the types of DSL are: asymmetric DSL (ADSL), Rate Adaptive DSL (RADSL), high bit rate DSL (HDSL), very high bit rate DSL (VDSL), and ISDN-DSL (IDSL). Currently, platforms for the various forms range from $1,500 to $2,500 per line; however, it is expected that as the demand for this technology increases, it will be offered at more reasonable rates.

Until fiber can be economically provided to end-users, CBT believes that ADSL will be most commonly used since it allows delivery of hi-speed data over copper technology. There are also numerous platforms and new vendors for ADSL which will support voice, video and data. Deployment of ADSL is expected in 1998; however, until the costs come down, widespread use by Internet customers will be slow to develop.

Although HDSL and IDSL support data traffic only, CBT believes these also hold high potential as long term solutions. Although there are still problems to be resolved with all of the xDSL technologies, CBT believes that in the long-term networks will deploy various forms of

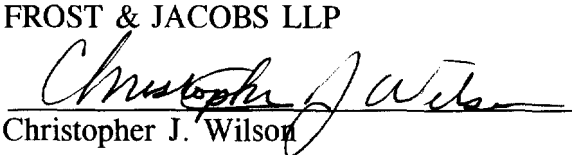
xDSL to address the specific needs of customers. Unfortunately, the implementation of all of the long-term solutions will be slowed until the current pricing system is amended.

IV. Conclusion

As the Commission begins to develop an NPRM to amend its rules as they relate to ESPs, CBT recommends that the Commission design its rules so as not to favor one solution over another. Rather, the Commission should give LECs the flexibility to deploy the solutions that satisfy the needs of their customers in the most efficient manner possible. Competition in the marketplace will dictate the solutions as long as the Commission's rules do not interfere in the process. Clearly, the Internet and other enhanced services have established themselves as viable services. The time has come for the Commission to eliminate rules designed to encourage the development of these services and let the market lead the way for the future.

Respectfully submitted,

FROST & JACOBS LLP

By 

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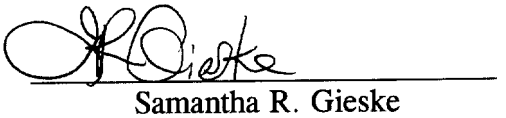
Dated: March 24, 1997

CERTIFICATE OF SERVICE

The undersigned hereby certifies that copies of the foregoing comments of Cincinnati Bell Telephone Company have been sent by first class United States Mail, postage prepaid, or by hand delivery, on March 24, 1997, to the persons listed on the attached service list.



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